Identifying the gaps: A scoping review of urban Indigenous health and wellness studies in Manitoba and Saskatchewan

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Abstract

The purpose of this paper is to review and summarize past urban Indigenous health and wellness studies conducted in Manitoba and Saskatchewan from 1996 to 2018 as part of a larger project to develop community-driven research platforms that focus on Indigenous health. Using the scoping review methodology, this paper presents literature from 13 databases in six categories: chronic disease, preventative and population health, maternal health, sexual health, traditional health and medicine, and the determinants of health proposed by the Public Health Agency of Canada (PHAC). This paper will be used as a first step to direct future research topics for communities and researchers by identifying research gaps.

Keywords: urban Aboriginal health, Manitoba, Saskatchewan, chronic diseases and conditions, preventative health and population, maternal health, sexual health, traditional health and medicine, social determinants of health

Résumé

Le présent article a pour objet d'examiner et de résumer les études qui ont été menées au Manitoba et en Saskatchewan entre 1996 et 2018 et qui portent sur la santé et le bien-être des Autochtones vivant en milieu urbain dans le cadre d'un projet plus vaste visant à élaborer des plateformes de recherche communautaires axées sur la santé autochtone. À l'aide de la méthodologie de l'examen de la portée, le présent article présente de la documentation tirée de 13 bases de données dans 6 catégories, soit les maladies chroniques, la santé préventive et de la population, la santé maternelle, la santé sexuelle, la santé et la médecine traditionnelles ainsi que les déterminants de la santé proposés par l'Agence de la santé publique du Canada (ASPC). Grâce aux lacunes en matière de recherche qui ont été décelées, le présent article servira de première étape dans l'orientation de futurs sujets de recherche pour les communautés et les chercheurs.

Mots-clés: santé des Autochtones en milieu urbain; Manitoba; Saskatchewan; maladies et affections chroniques; santé préventive et de la population; santé maternelle; santé sexuelle; santé et médecine traditionnelles; déterminants sociaux de la santé

separation, changing patterns of self-identification, and Bill C-31 of the Indian Act (1985) also contributed to the changing urban Indigenous population (Snyder and Wilson 2012). Between 1961 and 2006, the proportion of the Indigenous Canadian urban population grew from 13% to 53% (McCallum and Perry 2018). Winnipeg, the capital city of Manitoba, has the largest Indigenous population of any major Canadian city (McCallum and Perry 2018; Statistics Canada 2017). In Saskatchewan, the rapid urbanization of the Indigenous population occurred during the 1960s. The urban proportion within this population increased from just 5.5% in 1961 to 21.7% in 1971. Much of this change was in the two largest cities of Regina and Saskatoon (Anderson n.d.).

Urban Indigenous people have distinctive health issues compared to those residing in rural and remote communities. Some of these health issues include the loss of cultural identity, racism, stereotypes, and discrimination, especially when attempting to access healthcare, and lack of access to culturally appropriate or relevant social supports, including mental health and addiction services to address intergenerational trauma caused by residential schools and other assimilation policies (Indigenous and Northern Affairs 2017). For example, a 2004 study of First Nations people living with disabilities in Regina and Saskatoon (Durst and Bluechardt 2004) reveals feelings of social exclusion. The health of urban Indigenous peoples in Winnipeg has been highlighted by the Brian Sinclair Inquiry, which explored the complex causation, including racism and stereotyping, for the death of an Indigenous man in an emergency waiting room (McCallum and Perry 2018; The Brian Sinclair Working Group 2017).

Although Saskatchewan has not had a case of discrimination in their urban healthcare system as high profile as Brian Sinclair's, Boyer and Bartlett documented Indigenous women's experience with pressure, and in some cases, harassment from both nurses and doctors for tubal ligation (2017, 18). Indigenous women "experienced what might be interpreted as both physical and psychological pressure to have a tubal ligation immediately after childbirth" (2017, 18). Specifically, Indigenous women talked about feeling racially profiled while in labour and delivery, including "One woman [who] felt that she was profiled because she was new to the city and had few supports" (2017, 19).

The primary aim of our scoping study is to identify the gaps in urban Indigenous health and wellness research in Manitoba and Saskatchewan to support the current research focus on urban Indigenous health by the Manitoba Association of Friendship Centres (MAC), which is working in partnership with the University of Winnipeg Canadian Institutes of Health Research-funded Network Environment for Indigenous Health Research (NEIHR). As a research partner, MAC is working towards building their own research platform for urban Indigenous health research, especially as friendship centres are historically urban interventions, and this scoping review provides an overview of the gaps that they may want to explore with a specific focus on strength-based[3] research. The two research questions designed to locate the greatest breadth of scholarship are: (1) what type of urban Indigenous health and wellness research has been conducted in Manitoba and/or Saskatchewan? and (2) what type of urban Indigenous health and wellness resiliency or strength-based studies has been conducted at the community-based level in Manitoba and/or Saskatchewan?

The findings will also be of relevance to social science and humanities scholars from disciplines such as public and population health, community health services, medical anthropology, and social work in Manitoba and Saskatchewan; Indigenous social service providers; and policy makers to inform efforts to promote health equity and improve health outcomes for urban Indigenous Canadians in the prairie region. Since Manitoba and Saskatchewan have several similarities in terms of demographics—especially health conditions that are particularly salient and close in geography—both provinces were included in this study (Lafond et al. 2018).

Discussion on causes of health and wellness outcomes: Colonization

Although this paper and many studies that we examined tend to categorize people in broad terms such as "Indigenous" or "Aboriginal," it is important to recognize the diversity of values, lifestyles, and perspectives among the distinct language groups. Despite the limitations of these generic terms, this study aims to provide a snapshot of current research trends. Furthermore, there still tends to be similarities amongst the various language groups due to the legacy of colonialism experienced by Indigenous people. Colonialism is direct, cultural, and structural violence (Galtung 1988; Byrne, Clarke, and Rahman 2018). European contact brought with it many forms of destruction to the Indigenous population, including infectious diseases, such as smallpox, measles, influenza, bubonic plague, diphtheria, typhus, cholera, scarlet fever, trachoma, whooping cough, chicken pox, and tropical malaria (Kirmayer, Brass, and Tait 2000; McCallum and Perry 2018; Waldram, Herring, and Young, 1995; Young 1988; Young 1994).

Recognizing this context, it is important to situate this report within the larger Canadian context, and although Canada is not unique in possessing a colonial past, the effects are still present today through policies such as the Indian Act and structures such as the child welfare system (Government of Manitoba 2006). Although this review is not meant to provide a complete historical account of the Canadian Indigenous experience, it is important to acknowledge the legacy of residential schools, historical and intergenerational trauma, and the assimilationist policies that have left a strained relationship between Indigenous peoples and Canadian institutions, including educational and healthcare systems (Canadian Centre for Policy Alternatives 2012; Council on Social Determinants of Health 2015; Durst 2006; Dyck 2012; Marmot 2005; McCallum and Perry 2018; Reading and Wien 2009; Skinner and Masuda 2013). Structures such as "Indian hospitals" left many Indigenous people with untreated conditions or exposed to highly contagious infections (Lux 2016). These structures perpetuated racial inequalities, and ultimately created health disparities that continue today. The conditions are "manifestations of the complex interplay of historical, socioeconomic, and political conditions that influence health status and access to equitable health care" (Browne and Smye, 2002).

Method

This study uses the scoping framework defined by the Canadian Institutes of Health Research (CIHR n.d.) and outlined by Arksey and O'Malley (2005), and Levac, Colquhoun, and O'Brien (2010). Accordingly, this process is comprised of six stages: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; (5) collating, summarizing, and reporting the results; and (6) consultation exercise (Arksey and O'Malley 2005).

Studies were identified through a comprehensive search of 12 databases and one journal (SAGE, Web of Science, Social Science Abstracts, Urban Aboriginal Knowledge Network, PubMed, CINAHL, Google Scholar, JSTOR, MEDLINE [Ovid], Scopus, WinnSpace, MSpace, and the *International Journal of Indigenous Health*) using a combination of search terms related to health and wellness, geographical location, and Indigenous identity between August 15, 2019 and September 20, 2019 (see Appendix A). Medical terms were added based on the MeSH (Medical Subject Headings) guidelines to provide a more accurate and comprehensive list (see Appendix B). The databases and journal were chosen to include multidisciplinary perspectives, and to achieve the widest possible coverage of the literature related to urban Indigenous health. We extracted information related to location, date of publication, the area of study, and the type of study (statistical or experiential), and provided a summary of research (i.e., based on the paper's purpose and recommendations) to better understand the landscape of the literature.

In consultation with MAC to determine their priorities, it was decided that articles pre-dating 1996 were to be excluded. This was a deliberate choice since these articles pre-date the Royal Commission on Aboriginal Peoples (RCAP) that called for "initiatives to address social, education, health and housing needs, including the training of 10,000 health professionals over a ten-year period" (Hurley and Wherrett 1999), which ultimately changed the Indigenous health landscape and mandated a shift in academic studies and priorities. The final volume of the Report of the RCAP describes "A Twenty-year Commitment" aimed at restructuring the relationship between Indigenous and non-Indigenous people living in Canada, and the theme that dominates the recommendations is the call for Indigenous peoples to "exercise their autonomy and structure their own solutions" (1996, 1). The recommendations called for Indigenous people to participate in the design, management, and restructuring of social services and health organizations to make them more accessible and culturally appropriate. This review focuses on how these recommendations have been implemented, and in several cases not implemented, in academic literature involving the health of urban Indigenous people because we are specifically interested in locating and identifying shifts in academic health research that can be attributed to the Report of the RCAP, in addition to the areas that have not yet been addressed in the research, including the call for Indigenous people to be involved in developing their own solutions. In fact, our partnership with MAC on this scoping study is in response to the call for Indigenous people and organizations to be involved in their own health and wellness solutions. A more recent document, *Building on Values: The Future of Health Care in Canada*, recommends "new initiatives to improve timely access to care…and a special focus on the health needs of Aboriginal peoples" (Romanow 2002, xvii). This document also encourages Indigenous people to be involved in the process of reimagining healthcare (Petrucka, Bassendowski, and Bourassa 2007).

Our initial search returned 358 articles. Articles were then screened by title, abstract, and summary of the research based on inclusion and exclusion criteria. Article titles and abstracts were initially screened for inclusion;

for those in which relevance to the inclusion criteria could not be determined by title and abstract alone, the full text was read to gain further information. Fifty-five articles were removed for exclusion during this process. The most common reasons for exclusion during title and abstract review were that the study was conducted outside of the Canadian prairie provinces, was not conducted in an urban context, and/or was conducted prior to 1996. Finally, studies were reviewed in depth to confirm the inclusion requirements were met. Articles are included which were published within the past 22 years (1996–2018; search was completed in December 2018), address Manitoba or Saskatchewan urban Indigenous populations, and are published in English.

Following the data extraction and screening, we identified six emerging categories: Chronic Conditions and Diseases, Population and Preventative Health, Maternal Health, Sexual Health, Traditional Health and Medicine, and the Social Determinants of Health proposed by the Public Health Agency of Canada (PHAC) (for a breakdown of this last category, see Appendix C) and incorporated Greenwood and colleagues' expanded understanding of the determinants of health (Greenwood, de Leeuw, Lindsay, and Reading, 2015). We then coded each article using these six themes.

Results

Most of the collected articles begin with a statement acknowledging the lack of reliable statistical data about urban Indigenous populations (Haworth-Brockman, Bent, and Havelock 2009; Carter and Polevychok 2004; Sheppard, et al. 2017; Kastes 1993; Wilson and Cardwell 2012). Many scholars attribute this uncertainty to definition changes by Statistics Canada or the mobility patterns of urban Indigenous populations, which are the consequences of actions and policies that were intentionally designed to remove Indigenous people from developing*Figure 2:*
urban areas (Distasio, et al. 2004; Distasio, Sylvestre, and Jacobucci 2003; Ten Fingers 2005;
Mochama 2001; Peters 2002; Skelton 2002; Snyder and Wilson 2012). Other scholars discuss fertility and mortality rates of the Indigenous population as factors that affect the statistics of Indigenous peoples in urban areas (Robson 2010; Manitoba Bureau of Statistics 2010). Some scholars highlight the limitations of using statistics based on self-declared Indigenous status (Berry 1999), where others credit the rise of the Indigenous population statistics to a reclaimed sense of pride (Robson 2010). Nevertheless, we must acknowledge that the statistics do not fully capture the urban Indigenous population.

Most documents in this review were published in an academic setting by authors who were affiliated with a university rather than by a community-based organization. Authors came from a variety of disciplines, including medicine, community health services, nursing, sociology, city planning, geography, and social work. One consistent theme that emerged throughout the study overwhelmingly focused on various "negative and crisis-oriented experiences" (Urban Aboriginal Knowledge Network 2012, 40). The majority of articles and studies were on chronic diseases (diabetes, obesity, and nutrition; heart health; mental health; addiction; Human Immunodeficiency Virus) and social determinants of health (income and social status; employment and working conditions; education and literacy; childhood experiences; physical environments; social supports and coping skills; healthy behaviours; access to health services; biology and genetic endowment; gender; culture).

Chronic disease
Chronic health conditions or diseases are incurable, but symptoms are managed through various interventions. Examples of chronic diseases include diabetes, Human Immunodeficiency Virus (HIV), cardiovascular diseases (including hypertension and stroke), arthritis, addiction, Fibromyalgia Syndrome, and mental illness. According to the World Health Organization, up to 80% of early cardiovascular disease and diabetes can be prevented through consuming a balanced diet, engaging in regular physical activity, and not smoking (WHO, World Heart Federation, and World Stroke Organization 2011). These risk factor modifications are important; however, socioeconomic and other determinants can also influence health (WHO et al. 2011; WHO 2005). We broke down the category of chronic disease further into five sub-categories: diabetes, obesity, and nutrition; heart health; mental health; addictions; and HIV.

Diabetes, obesity, and nutrition. There were 39 articles that met the inclusion criteria in the literature that focused on the prevalence of diabetes among Indigenous peoples, including diabetes insipidus, gestational diabetes, and

diabetes mellitus (type 1 and type 2), in the urban context. According to the Manitoba Métis Federation, in 2013, the Manitoba Métis had a 34% higher prevalence rate of diabetes compared to all other Manitobans (Carter, et al. 2013, 3). The self-reported rate of diabetes is higher among First Nations adults living both on and off-reserve than among non-Indigenous people (First Nations Indigenous Governance Centre 2018); however, few studies distinguish between urban and rural/remote First Nations people, and those that do, argue that the risk of diabetes for First Nations people is higher in rural settings than in urban areas due to food access, security, cost, and selection (Turin, et al. 2016; Green, et al. 2003; Klomp, et al. 2008). About 38.4% of all Manitoban adults are overweight and 31.6% of adults in Manitoba are classified as obese, which puts them at a higher risk for type 2 diabetes (Canadian Diabetes Association 2018; Statistics Canada 2018c). In Saskatchewan, statistics reveal approximately 27% of all adults are overweight and a greater percentage of just under 46% are classified as obese (2018c). Diabetes can lead to other complications, such as heart attack, stroke, eye disease, vision loss, kidney disease, premature death, foot abnormalities, or amputation (Canadian Diabetes Association 2016; Harris, et al. 2013; Sherifali, Shea, and Brooks 2012). These complications highlight the need for early detection and prevention programs (Jacobs, et al. 2000).

One study provides context to explain the root causes of diabetes prevalence in the Indigenous population stating, "high rates of diabetes mellitus (DM) are tightly embedded within a context of poverty and disempowerment" (Green, et al. 2003, 558), ultimately relating to the social determinants of health framework as defined by the Public Health Agency of Canada. There is research on diabetes presented in the urban context (Tait Neufeld 2011) along with research that focuses specifically on gestational diabetes. Women, both Indigenous and non-Indigenous, who have gestational diabetes mellitus (GDM) are more likely to develop postpartum diabetes, however First Nations women are more likely to have GDM, "partially due to socioeconomic and environmental barriers" (Shen, et al. 2016, 2). In another study, a higher prevalence of GDM was detected in pregnant First Nations women living in rural areas compared to those in urban areas, "which was opposite for non-FN pregnant women living in rural and urban areas" (Aljohani, et al. 2008, E131).

Heart health. Related to diabetes and obesity, another sub-theme that emerged was cardiovascular health and stroke. Due to a higher prevalence of diabetes, Indigenous peoples have a higher risk of experiencing stroke at younger ages (Hill, et al. 2017). Other risk factors that increase the likelihood for heart disease or stroke include hypertension, atherosclerosis, commercial tobacco smoking, stress, unhealthy diet, and lack of regular exercise (Gillum, Gillum, and Smith 1984; Smylie, et al. 2018; Schultz, et al. 2018).

Since cardiovascular diseases (CVD) are significantly higher in Indigenous people in Canada compared to non-Indigenous Canadians (Waldram, Herring, and Young 2006) and are a leading cause of illness and death (Smylie, et al. 2018), heart health is an important section of the reviewed literature. Indigenous women had the highest rate of heart disease across Canada (Foulds, Bredin, and Warburton 2018; Anand, et al. 2001). In 2013, Carter, et al. (2013) examined the Métis experience with chronic disease, and their results highlighted the prevalence of chronic disease, including ischemic heart disease and diabetes as significantly higher than the rest of the Manitoban population. However, overall lower cardiovascular surgery rates were found among Indigenous people residing in urban areas (Sood, et al. 2013). This article did not provide reasons for the difference, but suggested further research was needed to confirm whether the different was caused by "inadequate access to care or whether they reflect unmeasured differences in clinical status or patient preference" (Sood, et al. 2013, 1635).

In the province of Saskatchewan, stroke is the third leading cause of death and one of the leading causes of disability in adults (Bartsch, et al. 2013). In Manitoba, approximately 2,000 Manitobans suffer from strokes each year (Heart and Stroke Foundation of Canada 2018). Throughout Canada, Indigenous people experience twice the risk of stroke, compared with non-Indigenous people (Hill, et al. 2017). The First Nations population across Canada has a higher rate of ischemic heart disease (IHD), a condition caused by reduced blood supply to the heart (Schultz, et al. 2018), and in Manitoba, the Métis population has a 40% higher prevalence rate compared to all other Manitobans for IHD (Carter, et al. 2013). A Manitoba study from 2006 concludes that Aboriginal child patients are overrepresented in posterior circulation ischemic stroke (Carey, Rafay, and Booth 2003).

For Inuit living in Canada, a diet that is high in fish and marine mammals and thus has a high selenium intake, has been found to reduce their risk of stroke (Hu, Sharin, and Chan 2017). According to our scoping review, there has been no research conducted on the diet of urban Inuit. Researchers from the University of Saskatchewan are currently studying the potential consequences that poor nutrition has on stroke rehabilitation (Heart and Stroke Foundation of Canada 2018), which could have major impacts for residents in urban areas in northern Manitoba, of

which the majority are Indigenous people that face food insecurity.

Inequalities in healthcare service are well documented (Browne, et al. 2016; Lawrence, et al. 2016; Poudrier and Mac-Lean 2009; Reading and Wien 2009; Riese 2001) with a variety of factors contributing to this experience including structural violence, racism, and socio-historical positions.

The Urban Aboriginal Knowledge Network (UAKN) provides the only heart health study to use a decolonizing methodology, which can be defined as "an approach that is used to challenge the Eurocentric research methods that undermine the local knowledge and experiences of the marginalised population groups" (Keikelame and Swartz 2019, 1; see also Smith 1999). In the 2015–2016 UAKN research project titled "Mite Achimowin ("heart talk" in Cree): First Nations Women Expressions of Heart Health," women produced digital stories related to their own heart health or caring for a relative with a heart health issue (National Collaborating Centre for Aboriginal Health 2018), which utilizes oral storytelling as a decolonizing research methodology. The themes from this study include determinants of health, such as "transitions from traditional to westernized lifestyles and diets; the trauma of residential schools; racism; access to medical care; culturally unsafe health care; suppression of culturally-rooted medicines, and economic and geographic marginalization" (Fontaine and Schultz 2018, 3).

Mental health. Twenty-three articles discuss the prevalence of different types of mental illness (also described as psychiatric disorders) with the majority focusing on suicide, self-harm, and mental health conditions as the result of experiencing homelessness. A small number of the articles coded fall outside of the scope of study looking at larger geographical regions or rural communities.

In our review, we captured one scoping study that features literature on the mental health of the First Nations, Inuit, and Métis of Canada from 2006 to 2016 (Nelson and Wilson 2017). Two studies explain that the impact of colonialism contributes to the current mental health of the Canadian Indigenous population (Kirmayer, Brass, and Tait 2009; Nelson and Wilson 2017) within the social determinants of health framework. Examples provided include "the manifestation of colonial ideas in policy decisions including child welfare, residential schools, and general social policy; and the concept of historical or intergenerational trauma" (Nelson and Wilson 2017).

Overwhelmingly, most articles highlight the social determinants of health as the root cause(s) of the mental health condition. Disproportionate rates of poverty, discrimination, harassment, inadequate housing, cultural stress, and lower education rates are all listed as contributing factors (Niccols, Dell, and Clarke 2010; Stout 2010; Williams, Belanger, and Prusak 2016). The importance of family and community connections (Petrasek MacDonald, et al. 2013), and environmental or land-based settings (Atkinson 2017) can address the rates of youth suicide for Indigenous people in Canada however are often absent from the urban literature.

When detailing the "elevated rates of suicide" (Wilson 2004), especially among the youth in First Nations, Inuit, and Métis communities, Kirmayer and colleagues (1999), and the Royal Commission on Aboriginal People's Special Report on Suicide among Aboriginal People (1995), acknowledge risk factors associated with suicidal behaviour in Indigenous communities including life history and socioeconomic status. In looking at suicide rates in the urban context, King, Smith, and Gracey state that "urbanisation often results in fragile, diverse communities" (2009, 80), which contribute to a loss of cultural identity and social cohesion.

One study, titled "Substance Abuse in an Urban Aboriginal Population" (Jacobs and Gill 2001), was conducted in partnership with the local Friendship Centre in Montreal. Although this study is technically outside the geographic scope of this survey, the study was included at the request of the interest from the co-author and community organization, the Manitoba Association of Friendship Centres. The community-based research from another local Friendship Centre is important for addressing suicide rates for the First Nations population, which can be referred to as "an epidemic" (Statistics Canada 2018b; Public Health Agency of Canada [PHAC] 2016; Centre for Suicide Prevention n.d.; Talaga 2018). This community-directed project found that individuals who abused substances had a greater connection to the criminal justice department, with more convictions and increased incarceration time, and they were more likely to be on probation or parole. Most individuals who abuse substances in the study have complex and compounding issues, including "significant medical problems that required treatment" (Jacobs and Gill 2001, 8), and lack of proper identification required to access medical treatment and services. Results indicated high levels of psychological distress, including depression, anxiety, and attempted suicide (Jacobs and Gill 2001).

Many studies call for a more positive and empathetic approach to mental health services to reduce stigma, including recommendations for service providers to "re-humanize" their support methods (Voronka, et al. 2014, Enns,

et al. 1997). Six National Collaborating Centres for Public Health (NCCPH) across Canada have called for mental health promotion to begin with children and youth (Atkinson 2017; Canadian Mental Health Association 2019; National Collaborating Centres for Public Health 2017).

Addiction. In 2014, the Urban Aboriginal Knowledge Network completed a study titled "How the Urban Aboriginal Community Members and Clients of the Friendship Centre in Saskatoon Understand Addictions Recovery" (Hansen and Callihoo 2014). Using the shared experiences of clients in addiction recovery, this qualitative research showcases the Aboriginal Friendship Centre's approach responds to poverty-related issues through an array of services and programs. Most participants discussed the roles of their "children; family support; counselling; a sense of belonging to a community, such as an Aboriginal Friendship Centre; traditional teachings; sweat lodge ceremonies; spirituality; and Alcoholics Anonymous" (Hansen and Callihoo 2014, 15).

One article reviews the rates of problem gambling for urban Indigenous individuals in the prairie provinces (Williams, Belanger, and Prusak 2016). This was attributable to having many "more risk factors for problem gambling," such as a greater level of participation in gambling, having a younger average age, and a range of social conditions, including experiences with poverty, unemployment, and cultural stress that are all conducive to the development of addictive behaviour. The link between substance abuse and "a range of disadvantageous social conditions (e.g., poverty, unemployment, poor education, cultural stress)" are conducive for addictive behaviour (Williams, Belanger, and Prusak 2016, 724).

Human Immunodeficiency Virus (HIV). In Canada, the state response to questions about HIV non-disclosure have been met with criminalization based on interpretations of existing criminal law. The social determinants of health (i.e., stigma, discrimination, poverty, untreated mental illness, etc.) determine if and how people disclose their status. Injection drug use is the most common way that HIV is transmitted among Indigenous people in Canada (Public Health Agency of Canada 2014).

In the urban setting of Regina, one partnership study reviews the legal impacts on Indigenous people, especially Indigenous women who are HIV positive. Results identify the need for "increased and new supports in Regina regarding nondisclosure and the law that are accessible to Indigenous people who are HIV positive" (Snyder 2018, 21).

Population and preventative health

Twenty-eight articles were coded under preventative and population health and included topics such as vitamin deficiencies, vaccinations, access to healthcare, and qualitative articles focused on experiences in the healthcare system.

Many of the studies explore personal experiences including the Urban Aboriginal Peoples Study (Environics Institute 2010), First Nations Health and Wellness in Manitoba (Allec 2005), and Anishinaabe Ik-We-Mino-Aie-Win Aboriginal Women's Health Issues (Bent 2004). The findings indicate a need to balance physical health with mental, emotional, and spiritual health. The complexity of health in these studies is not limited to the Western biomedical indicators, but focused on balance and recognizing the role of the social determinants of health.

One study on preventative health demonstrates that Métis-specific experiences of colonialism have "deeply affected their perceptions of the vaccine and [the H1N1] pandemic" (Driedger, et al. 2015, 1). Driedger and colleagues write, "the colonial legacy functioned as a lens through which the pandemic was interpreted, inscribing events with an additional layer of meaning-making that did not exist for general population Canadians" (2015, 11). Métis people within the study felt unequipped with reliable health information related to vaccines despite the participants' high vaccination rates.

Another, more recent, preventative study uses arts-based activities as a harm reduction approach for girls to envision their future while addressing historical trauma (Cooper, Driedger, and Lavoie 2018). The results explain the need to expand harm reduction approaches to create "a safer and healthier environment for all girls and women" (2018, 21). This preventative approach can respond to current understandings of what it means to "not be hurt," and thereby create a safer future.

Maternal health

We originally captured 25 studies on maternal health in our database review; however, after applying exclusion criteria, the number was reduced to 16. Most studies focus on understanding inequalities, birthing needs, adopting

culturally safe approaches to maternal care, or how the social determinants of health interacted with medical care (Altman, et al. 2017; Downey and Stout 2011; Murdock 2009; Kingston, et al. 2016; Heaman, et al. 2007; Heaman, et al. 2015a; Luo, et al. 2010). One study examines the intersection of mental health, such as (postpartum) depression, with pregnancy and maternal health (Clarke 2008). This study recommends that education on postpartum depression should be presented during initial home visits following the birth or during routine medical appointments.

A study that identified higher rates of inadequate prenatal care in the inner-city of Winnipeg and in northern Manitoba (Heaman, et al. 2007) led to a follow-up study conducted across eight neighbourhoods in Winnipeg's inner city to investigate barriers to accessing prenatal care from the perception of the healthcare providers (Heaman, et al. 2015b). Identified barriers were grouped into four themes: caregiver qualities, healthcare system barriers, personal barriers, and program and service characteristics (2015b, 4). When asked how to address these barriers, the most frequent suggestion was to establish more community-based prenatal care services and clinics (2015b, 11).

In a study that addressed risk factors for spontaneous preterm birth at two tertiary hospitals in Winnipeg, a condition that is increasing across Canada and has a higher rate in the Indigenous populations of Canada, the researchers find that "young maternal age and single marital status were protective factors for Aboriginal women" (Heaman, et al. 2005, 189). The authors of this study note that their finding opposes similar, but much earlier, studies (Berkowitz and Papiernik 1993; Lumley 1993) that "link young maternal age and single marital status to an increased risk of preterm birth" (2005, 189).

More recently, a Winnipeg-based study that provided doula care for Indigenous women identifies clashes with mainstream health and social services (Cidro, et al. 2018). Doulas are not only emotional support companions for pregnant women, but also are advocates who connect women to social supports following the birth. Doulas maintain boundaries within the medical birthing experience and empower Indigenous women to create a positive experience for themselves. The doulas also experience transformation "or [were personally] nourished through this training and practice" (Cidro, et al. 2018, 5). The need for culturally relevant maternal care is especially important in the urban setting given the current policies of evacuation from reserve or rural communities which increases the likelihood that Indigenous women will give birth in the city.

Sexual health

Eleven articles that study sexual health cover experiences living with HIV/AIDS, stigma associated with HIV/AIDS, sexual violence, youth-specific experiences, and the connection between the social determinants of health as a predictor for sexually transmitted infections and diseases. Since HIV/AIDS articles were coded in chronic disease, the number of articles that focus on sexual health is minimal.

One action research report details a partnership between community-based researchers in Winnipeg and the Faculty of Nursing at the University of Manitoba with the goal of fusing sexually transmitted disease (STD) prevention research with action research at the community level (Migliardi, Schellenberg, and Ormond 2002). The study reveals how providers perceive the barriers to STD prevention and the risks or vulnerabilities that youth face regarding STDs. The study proposes "youth-friendly" education and service strategies in Winnipeg (Migliardi, Schellenberg, and Ormond 2002, 45).

A 2007 report details the limited urban services and supports available for Indigenous women, Indigenous transgender women, and Indigenous Two-spirit women who have been sexually victimized (Bird 2007). The results of this study outline twelve priority recommendations from the community to address the issue of violence against Indigenous women, Indigenous transgender women, and Indigenous Two-spirit women. These recommendations include the development of Indigenous sexual victimization services and addiction treatment services with involvement from the Indigenous community; the creation of an Indigenous Sexual Assault Centre; the inclusion of men in the healing process; and most importantly for future research, the utilization of a human rights framework, and support for further research that examines Indigenous women's experiences related to sexual victimization.

Traditional health and healing

Six articles captured in the search focus on traditional health or alternative medicines. One 2004 study conducted in Saskatoon looks at how Indigenous women want access to traditional healers and alternative medicine or therapies. Their vision for an Aboriginal Women's Health Centre is the result of participants wanting control over their health

and centring their understanding of health on the Medicine Wheel and Traditional Teachings (Saskatoon Aboriginal Women's Health Research Committee 2004). This approach to wellness is based on strengthening community, culture, and/or Indigenous identity.

Food and food sovereignty, which are often related to the social determinants of health (identity, culture, and relationship building), or as an approach to chronic disease (i.e., type 2 diabetes), are captured in one Urban Aboriginal Knowledge Network report (Cidro and Martens 2015) and two graduate theses (Cyr 2018; Sobie 2017). These documents are strength-based and demonstrate that food is more than simply nutrition. Sobie (2017) highlights that women feel immense responsibility for their role in food provisioning within their family, and to overcome short term food security, "there must be an integration of government support systems and increased financial support to help women transition out of poverty (and off social assistance)" (110). Sobie states that long-term solutions include protecting the right to food as a national policy.

Social determinants of health

Another predominant theme was the Public Health Agency of Canada social determinants of health, which often appeared in the analysis of articles unrelated to the theme. Social determinants of health (SDOH) are used to expand the understanding of epidemiological or biomedical health into a more holistic and interconnected view of health conditions in the body. The goal of using a SDOH framework is to determine the root cause(s) of health conditions (Fernandez, MacKinnon, and Silver 2010; Canadian Council on Social Determinants of Health [CCSDH] 2015; Dyck 2012; King, Smith, and Gracey 2009; Nelson and Wilson 2017; National Collaborating Centre for Aboriginal Health 2012) and recognize how the determinants interact to reinforce each other. SDOH include factors that contribute to the overall wellbeing and health of an individual or group, including stress, socioeconomic status, education, support networks, physical activity, geographical location, housing, and spiritual connections (Reading and Wien 2009; Marmot 2005; CCSDH 2015). Within this framework, the greatest predictors for health status are education, employment rates, and income level, which are factors that also encourage urban migration (Place 2012).

Saskatchewan and Manitoba have the second highest percentage of their Indigenous population living in overcrowded conditions (National Collaborating Centre for Aboriginal Health 2012; Statistics Canada 2011; Indian and Northern Affairs Canada 2009). Overcrowded housing conditions can lead to the spread of contagious disease, including tuberculosis (McCallum and Perry 2018).

In Saskatoon, the Circle of Voices program aims to increase the self-esteem of Indigenous youth through their engagement in cultural and theatre activities (Hatala 2018). This strength-based study is designed to "promote societal [policy] change and implement positive social structures and supports" (Hatala 2018, 9). In Winnipeg, a participatory action research project was conducted in 2012 by Emily Anne Skinner for her graduate thesis. This study utilizes tools such as "visual art, photography, spoken word, music, and dance" (2012 ii) to understand how Indigenous youth across the city of Winnipeg experience health inequities.

Some literature articulates experiences of discrimination or racism (Webster 2018), which could prevent individuals from seeking help (Lawrence, et al 2016; Woodgate, et al. 2017), and other research focuses on factors such as lifestyle or environmental influences, geographic location, or mobility (Skelton 2002; Skinner 2012; Lange 2010), cultural connection (Ten Fingers 2005), language (Riese 2001), education level, and income level (Heaman, et al. 2015) as causes for health conditions. Studies list more than one factor contributing to health experiences; for example, one graduate research study conducted by Riese (2001) notes family involvement, racism, and language are all factors in patients' perceptions of care at the Health Science Centre in Winnipeg. In her graduate thesis, Sinclaire (1997) details the cultural norm of "obligation" faced by Indigenous women, which expects them to care financially for extended family and may include both biological and non-biological relations, and how this obligation impacts food security. Many studies present a deficit-based perspective of the community and struggle to communicate how the social determinants interact and intersect in complex ways to reinforce each other and/or their direct link to biomedical conditions.

Limitations of this scoping study and looking at the contemporary context

Many of the studies collected during this review occurred between twenty and thirty years ago, and we recognize that many Indigenous social service organizations have been answering the calls and recommendations from these studies

over the past thirty years. For example, in downtown Winnipeg, the Wii Chiiwaakanak Learning Centre runs cultural programming to connect individuals with traditional knowledge, including Pow Wow Club, Women's Self-defense Classes, Learning Anishinaabemowin, and the Sacred Seven Healthy Relationships program. Approximately 90% of participants in Pow Wow Club and the Women's Self-defense Classes indicate that they joined the program to help them make positive changes (e.g., learning to develop more positive and healthy relationships with others) either in their own life or in their family members' lives. For the Sacred Seven Healthy Relationships Program, 100% of participants reported feeling a sense of pride and connection to their culture, and that this connection is important to their identity and how they feel about themselves.[4]

In Regina, Circle Project, a not-for-profit charity, uses Indigenous culture and teachings as the foundation for their programs and counselling services. Nearly 80% of the homeless population of Regina is of Indigenous ancestry (Docherty 2018), and Circle Project's Cultural Connections program was created to provide cultural supports to these individuals (Circle Project 2014). According to Circle Project, this program "is key to their healing journey" and by using these supports, they are "gaining or regaining their cultural identity and pride, …self-esteem and … self-sufficiency."

Conclusion

The purpose of this scoping review is to summarize urban Indigenous health and wellness studies in Manitoba and Saskatchewan to provide an accurate snapshot of the types of studies available and identify the gaps in knowledge, which we will delineate further below.

Though identified as a theme in this review, decolonized approaches and methodologies were scarce in the literature. Only one study identified oral storytelling as a decolonized approach for research method (Fontaine and Schultz 2018), and two graduate theses also utilized a decolonized approach to their research (Sobie 2017; Cyr 2018).

Related to the dearth of decolonized approaches, there are also substantial gaps in strength-based research, with little attention to traditional knowledge or traditional medicine in the urban context. Although colonization has established health inequalities and challenges (Adelson 2005), Indigenous people across Canada continue to survive, a notable indicator of their strength and resiliency that is often unrecognized in academic literature (Mundel and Chapman 2010). Articles that capture "traditional" medicine often come from a psychotherapy perspective and aim to blend current practice with healers or teachings (Bojuwoye and Sodi 2010; Moodley and Sutherland 2010; Moorehead, Gone, and December 2015; Saskatoon Aboriginal Women's Health Research Committee 2004). The connection between foods as medicine is often described from a chronic disease perspective (diabetes), whereas spiritual health was entirely absent from the literature.

Under the sexual health category there is a significant need to include a wider scope of diseases, evaluation of harm reduction strategies, and culturally appropriate education for prevention.

A Canada-wide study examines the correlates of abuse around the time of pregnancy and argues that screening for socioeconomic difficulty and psychosocial risks (poverty, age, marital status, and stress) must be used in order to identify women "at risk" for abuse during the prenatal and postnatal period (Kingston, et al. 2016). Although this study was not specific to the urban context, nor was it confined to Manitoba and Saskatchewan, the results are important for future research in the urban areas of Manitoba and Saskatchewan.

Maternal health for Indigenous women is often considered in province-wide studies (i.e., population of Manitoba) or rural, isolated communities rather than in an urban context. This lack of focus on the urban context is likely a response to the maternal evacuation policies and maternal mortality rates. As Varcoe et al. observe, the dominance of biomedicine has resulted in the imposition of medically-based maternity technologies, and Indigenous women are now being told that "their time honored midwifery and birthing practices were unsafe and that they must turn to the advances of western medical practice for 'modern' maternity care" (2013, 7). The impact of this message and how it is operationalized, especially in an urban setting, is significant for the physical and mental health of Indigenous women and families, and could be researched further. The National Aboriginal Health Organization found that continuous emotional and social support for women during childbirth has positive impacts, not only for labour and delivery, but also for breastfeeding rates and attachment (NAHO, 2008). Métis scholar Anderson (2010) draws our attention to Indigenous motherhood and family as key targets of colonialism. She writes, "Empowered motherhood was not only a practice but also an ideology that allowed women to assert their authority at various political levels" (2010, 83–84).

Research by Darroch and Giles (2016a) calls on healthcare providers, researchers, and policy makers to unders-

tand the ways in which the social determinants of health affect pregnant, urban First Nations women in Ottawa. The same researchers have studied Aboriginal women's perceptions of weight gain during pregnancy in the urban context of Ottawa (Darroch and Giles 2016b). Both of these studies fell outside the scope of this review based on geographical location, however, they can direct opportunities for urban prairie province research. Though excluded from this review based on inclusion criteria, a study conducted in Quebec connects the use of drugs, including marijuana and alcohol, during pregnancy and maternal postpartum distress rates and violence. Similar studies could be conducted in Manitoba or Saskatchewan in the future.

Generally, urban or off-reserve Indigenous people from the prairie provinces are dramatically underrepresented in the literature; this is a significant gap that needs to be addressed. More research is needed to identify the unique strengths and challenges of the urban Indigenous population.

Acknowledgements

Notes

[1] The term Indigenous in the Canadian context includes First Nations, Métis, and Inuit people (Government of Canada 2017a, Government of Canada 2017b). The term First Nations is used throughout this paper instead of Indian. The term Indigenous and Aboriginal are used interchangeably throughout this paper referring to all First Nations (status and non-status), Inuit, and Metis people.

[2] It is important to recognize that census definitions have changed and evolved over time, which has created challenges for accurate statistical information on the urban Aboriginal population(s) (Peters 2011).

[3] To be coded as a strength-based study, urban Indigenous organizations need to have initiated the study, interpreted the data collected, and/or used empowerment-based approaches within the methods section of the literature.

[4] This information is taken from internal institutional evaluations that are not published.

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Appendix A
Screening study parameters

Health and Wellness	Urban	Indigenous	Province or City	Inclusion Criteria	Exclusion Criteria
Diabetes	Urban	Aboriginal	Manitoba *includes all cities and town in Manitoba	Location was urban	Regional or national studies that do not specifically mention Manitoba or Saskatchewan (or a city/town within either province)
Chronic Diseases	City	Native		Within one of the two provinces	
	Cities	Non-status	Saskatchewan *includes all cities and towns in Saskatchewan		
Mental health	Town	Self-identify		Minimum one paragraph on urban Indigenous Health and Wellness	
Obesity	Metropolitan	First Nation			
Addiction		Metis			
Nutrition		Inuit			Rural, remote or on-reserve studies
Health promotion		Indian			
Community-based		*Includes all references specific to aboriginal communities known to Manitoba and Saskatchewan			Off-reserve studies that do not reference specific urban Indigenous populations
Traditional Medicine					
Alternative approaches to Health and Wellness					

Appendix B
MeSH terms

Diabetes	Mental Health	Obesity	Addiction	Nutrition	Sexually Transmitted Infections and Diseases
Hyperglycemia Glucose Intolerance Diabetes Mellitus Gestational Diabetes Diabetic Ketoacidosis Donohue Syndrome Latent Autoimmune Prediabetic State Diabetes Insipidus Neurohypophysis Antidiuretic hormone (ADH) Kidney Vasopressin Pituitary Gland Hypokalemia	Therapy Psychological Emotional Social Well-being Psychiatry Psychoses Mental disorders Behavioural Behavior mechanisms Psychoanalytic Mental illness	Body Mass Index (BMI) Metabolism Parasitology Diet Genetic Lipectomy Metabolic Prader-Willi Syndrome Over-weight Hypertension Obesity Hypoventilation Syndrome Hypoxia Hypercapnia Polycythemia Hypersomnolence Sleep Apnea	Dependency Impulsive Behaviour Compulsive Drug Substance Abuse Substance dependence Chemically induced Habituation Narcotic Alcohol Intoxication Binge-drinking Overdose Phencyclidine Abuse Inhalant Opioid	Dietetics Nutrigenomics Sports Nutritional Sciences Nutrition Physiology Food technology Micronutrients Vitamins Amino acids Carbohydrates Lipids Salts Intravenous Feeding Diet Therapy Nutritional support Malnutrition	Human immunodeficiency virus (HIV) Immunodeficiency Virus Receptors Acquired Immunodeficiency Syndrome (AIDS) T-lymphocyte Viral Asymptomatic seropositivity Bacterial Antiretroviral therapy Venereal
Insulin Lipodystrophy			Psychoses Wernicke Encephalopathy Withdrawal Delirium Seizures Amphetamine Neonatal Abstinence Syndrome Phencyclidine Abuse	Deficiency Diseases	

Appendix C
Determinants of health proposed by Public Health Agency of Canada (PHAC)

Determinants of health are a comprehensive range of personal, social, economic and environmental factors that determine and influence health.
1. Income and social status 2. Employment and working conditions 3. Education and literacy 4. Childhood experiences 5. Physical environments 6. Social supports and coping skills 7. Healthy behaviours 8. Access to health services 9. Biology and genetic endowment 10. Gender 11. Culture